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Appellants :	Margaret Gwyn Latimer et al.	Docket No.:	14377.1
Serial No.:	09/652,607	Group:	1771
Confirmation No:	3027	Examiner:	C. Pratt
Filed:	August 30, 2000	Date:	June 24, 2003
For:	Resilient Fluid Management Materials for Personal Care Products		

Paul 283

Brief on Appeal to the Board of Patent Appeals and Interferences

MAIL STOP APPEAL BRIEF – PATENTS
COMMISSIONER FOR PATENTS
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Sir:

Pursuant to 37 C.F.R. 1.192, Appellants respectfully submit this Brief in support of their Appeal of the Examiner's **Final Rejection** of claims 13-29 mailed on December 31, 2002.

On April 30, 2003, Appellants, pursuant to 37 C.F.R. 1.191, timely mailed a Notice of Appeal with a one month extension of time. Thus, the time period for filing this Brief ends on June 30, 2003.

In accordance with 37 C.F.R. 1.192(a) this Appeal Brief is filed in triplicate.

Real Party in Interest

The present Application has been assigned to Kimberly-Clark Worldwide, Inc.

Related Appeals and Interferences

At this time, the Appellants and Appellants' representative are not aware of any related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

Status of the Claims

Claims 13-29 remain in the application. Claims 13-29 stand finally rejected.

Status of Amendments Filed Subsequent to Final Rejection

No amendments to the claims were filed subsequent to the Final Rejection.

Summary of the Invention

Appellants' invention, as claimed, is directed to a laminate structure containing a corrugated nonwoven web. The laminate has at least two layers, described as a first layer and a second layer. The first layer is the corrugated nonwoven web having a surface and a surface area, wherein at least 40 percent of said surface area is made from fusible fibers. The second layer may be a nonwoven web, woven web, knit web, film, tissue, paper, foil or foam. In producing the corrugated layer, the nonwoven web, in its unbonded state, is corrugated to produce folds and subsequently bonded throughout. The corrugated layer is folded in a fashion such that there are no gaps present between the individual folds, as is shown in Figure 10. The effect of not having gaps between the folds and having at least 40 percent binder fibers at the surface of the corrugated nonwoven is the laminate has improved compression resistance and resiliency (page 18, lines 6-12). The fold to fold attachment provides that a fluid entering the fibrous network will be guided by the fiber structure. In contrast, corrugated webs with gaps between the folds allows fluid to flow freely on the surface with the fluid entering the web. When used in a personal care product, a freely moving liquid moving along the surface of the web can result in leaks from the personal care product (page 17, lines 18-25).

The present invention is also directed to a personal care product having the laminate aligned in the product in a traverse direction.

The Issues Presented

The following issues are presented for review:

1. Whether the Examiner erred in rejecting Claims 13, 14, 17, 18, 20, 22, 23 and 24 under 35 U.S.C. § 103 as being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Chien et al. (U.S. Patent 5,558,924).

2. Whether the Examiner erred in rejecting Claims 15, 16, 19, 21 and 25-29 under 35 U.S.C. § 103 as being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Chien et al. (U.S. Patent 5,558,924) in view of Huntoon et al. (U.S. Patent 5,906,879).

Grouping of the Claims

Claims 13, 14, 17, 18, 20, 22, and 23 stand or fall together as related to issue 1 above and directed to a laminate of the present invention.

Claims 15, 16, 19 and 21 stand or fall together as related to issue 2 above and directed to a laminate of the present invention.

Claims 24-29 stand or fall together, but are independent of the laminate claims (claims 13-23), since claims 24-29 are directed to a personal care product.

Argument

Issue 1

Claims 13, 14, 17, 18, 20, 22, 23 and 24 are novel and unobvious and thus are patentable over Chien et al. (U.S. Patent 5,558,924).

In the statement of the rejection¹, the Examiner correctly notes that Chien et al. teaches a corrugated nonwoven web, that the nonwoven web is unbonded when corrugated, and then subsequently bonded. The Examiner also correctly notes that Chien et al. does not teach the claim percentage of fusible fibers on the surface corrugated nonwoven web. The Examiner incorrectly notes; however, that the corrugated nonwoven web of Chien et al. lacks gaps between the folds. To support that Chien et al. does not teach gaps between the folds, the Examiner relies upon column 3 and Figures 9 and 11 of Chien et al.

Appellants have carefully reviewed column 3 of Chien et al. and are unable to find where Chien et al. state, teach or suggest that there are no gaps between the folds. However,

¹ The statement of the rejection by the Examiner only appears in the Final Rejection dated December 31, 2002. The Examiner applied the Chien et al. reference for the first time in the Final Rejection, even though the Chien et al. reference was made of record by the Appellants in the Information Disclosure Statement filed concurrently with the filing of the above-identified application and the Examiner made Chien et al. of record in the first Office Action.

Appellants were able to locate in column 4, lines 6-13, that gaps or spaces exists between the corrugations, as is shown in Figure 5 of Chien et al. Further, Figures 6 and 7 show gaps between the folds or corrugations. In addition, Chien et al. states in column 6, lines 35-39 that the corrugations do not need to be in a closely spaced arrangement. Therefore, it is rather clear that Chien et al. desires spaces between the folds and does not desire a structure with no spaces or gaps between the corrugations.

In response to the argument that column 3 of Chien et al does not teach that no gaps should be present between the folds, the Examiner states in the Advisory Action dated April 3, 2003, "column 3 at lines 65-68 states that adjacent corrugations are in mutual contact". This statement is a mischaracterization of Chien et al. The column 3, lines 65-68 state:

"[u]pon cooling of the corrugated blanket, the melted fibers solidify to strongly bond the high melting point fibers to one another as well as adjacent corrugations in mutual contact."

This sentence merely state that if the corrugation have a mutual contact point or points, the binder fibers will bond these contact point or points together. Nothing in this sentence states that there are no gaps between the folds or corrugations. As can be seen in Figures 4, 5 and 10 of Chien et al., the corrugations may have contact points and still have gaps between the corrugations. Therefore, the Examiner is impermissibly reading the Appellants' claim limitation into this sentence of Chien et al.

The Examiner further relies upon column 3, lines 28-30 for the proposition that the process "can be modified to eliminate the gaps between the folds". Column 3, lines 27-30 state:

"[t]hus, the cooperation of the pivoting conveyor 20 and the forming chamber 30 determines the height, pitch and orientation of the corrugations".

Again, Appellants do not see how this sentence states that no gaps should be present between the corrugations. Gaps between the corrugations are not discussed in this sentence. In order to arrive at this conclusion, the Examiner is reading more into each of the quoted sentences than is actually stated.

To further bolster his statements, the Examiner states in the Final rejection that no gaps between the corrugations are shown in Figures 9 and 11. Appellants point out that Figures 9 and 11 concern the brushing aspect of the invention and the results of the brushing. These Figures do not show the entire web and only show the surface of the web. In fact, Figures 9 and 11 are actually magnifications of the web near the surface to show the process of brushing

and the resulting effects at an individual fiber scale. In considering Figures 9 and 11, one must also consider Figure 10, which shows the results of brushing on the entire web, from a view of the full web, not a view on an individual fiber scale. In fact, Chien et al. states in column 5, lines 33-40, that Figures 10 and 11 illustrate the fiber bridging the gaps between the adjacent corrugations. This sentence clearly indicates that gaps are present between the adjacent corrugations. Therefore, Figures 9 and 11 do not support the Examiner's contention that Chien et al. teach or suggest preparing a web with no gaps between the corrugations and the associated text of the Chien et al. patent actually teaches that there are gaps between the corrugations. Further, Appellants note that bridging a gap is not filling a gap to remove any gaps between the corrugations. Bridging of the gaps is further discussed by Chien et al. in column 5, lines 41-50

In the Advisory Action, the Examiner further states that Figure 8 also supports a corrugated web without gaps between the corrugations. However, Figure 8 is intended to show how the corrugated web is produced when a brushing technique is used to bridge the gaps. Figure 8 of Chien et al. is not intended to show the configuration of the final product. The configuration of the final product is shown in Figure 10, which clearly shows gaps between the corrugations. Therefore, Figure 8 fails to establish that it is desirable to form a corrugated nonwoven web without gaps between the corrugations.

On the gap limitation of the claims, the Board's attention is also directed to column 6, lines 31-39 of Chien et al., which clearly states the bridging results in a structure that does not need the corrugation arranged in a closely spaced arrangement, resulting in a softer, lower density material. One skilled in the art reading the entire Chien et al. reference would be directed to form a corrugated nonwoven web with gaps between the folds. Chien et al. actually teaches away from a corrugated web without gaps between the corrugations.

The Examiner also finds that using the Appellant's claimed percentage of fusible fibers is obvious and only a matter of routine skill in the art to optimize, motivated by the desire to obtain suitable bond strength to improve the tear resistance. There is no suggestion in Chien et al. which teaches one skilled in the art that at least 40% of the surface of the web should be fusible fibers. As is stated in the specification at page 17, lines 14-16, at least 40% of the fibers need to be fusible to result in a corrugated web with sufficient mechanical compression resistance. Further, the Examples in the specification show that corrugated webs having less than 40% fusible fibers have poorer compressive toughness as compared to the webs having more than 40% of the surface comprised of fusible fibers. In addition, the Examiner has not shown that it is

known in the art of corrugated nonwoven webs to use more than 40% fusible fibers on the surface of the web. Chien et al. only make a suggestion that the web may contain fusible fibers, but does not provide any direction to those skilled in the art to use at least enough fusible fibers, so that the surface of the corrugated nonwoven web is at least 40% fusible fibers. In addition, Appellants are the ones who have made the contribution to the art recognizing that at least 40% of the surface of the corrugated nonwoven web should be fusible fibers, to obtain compressive toughness. Hence, the claim limitation requiring that the corrugated nonwoven web have at least 40% fusible fibers at the surface of the web is not taught in the prior art.

In the Advisory Action, the Examiner attempts to bolster his argument by again relying upon column 3, lines 65-68, which is quoted above. This sentence clearly requires the presence of high melting fibers to be present in the web, which is contrary to the Examiner's statement that 100% of the fibers may be fusible fibers. In any event, this sentence does not suggest at least 40% fusible fibers at the surface of the web. The Examiner finds motivation to use at least 40% fusible fibers on the surface of the corrugated nonwoven by the statement found in column 2, lines 3-5 that fusible fibers results in a product with strength, thereby finding that one skilled in the art would be motivated to add more fusible fibers. Again, the Examiner has read more into a statement in Chien et al. to make an argument that the claims are obvious. Appellants point out that this sentence states that bonding the web increases web strength, not that more fusible fibers further increases the web strength.

Finally, the Examiner states that the claimed configurations of the present claims are shown in Figures 5 and 6. Appellants disagree. The configurations shown in Figures 5 and 6 have spaces between the corrugations. Clearly, the claims of the present application do not allow for spaces or gaps between the folds. Therefore, the Examiner's statement is clearly incorrect.

With respect to claim 24, Chien et al. does not teach using the corrugated nonwoven web laminate of claim 13 in a personal care product. Chien et al. does state that the corrugated nonwoven web may be used in clothing. The clothing discussed by Chien et al. includes items such as snow suits. Further there is no teaching in Chien et al. that the laminate should be placed in a transverse direction, as is required by claim 24. Therefore, the limitations of claim 24 are also not taught or suggested by Chien et al.

In order for a reference to render a claim obvious under the meaning of 35 USC 103, the invention as a whole, including all of the limitations of the claims, must be taught or suggested by the reference. *In re Royka*, 180 USPQ 580 (CCPA 1974). As is

stated above, the claim limitations requiring the percentage of fusible fibers on the surface of the corrugated web, and that no gaps are present between the folds are not taught or suggested by Chien et al. Chien et al. actually teaches away from a corrugated web having no gaps between the corrugations. Therefore, the rejection of claims 13, 14, 17, 18, 20, 22, 23 and 24 based on the Chien et al reference is untenable, and should be reversed.

Issue 2

Claims 15, 16, 19, 21 and 25-29 are novel and unobvious and thus are patentable over Chien et al. (U.S. Patent 5,558,924) in view of Huntoon et al. (U.S. Patent 5,906,879).

In the statement of this rejection, the Examiner only relies upon Huntoon et al. to teach that corrugated webs may be prepared from superabsorbent fibers and that corrugated webs may have folds of differing heights. The Examiner correctly acknowledges that Chien et al. does not teach these claim limitations.

First, why would one skilled in the art combine the teachings of Huntoon et al. with Chien et al? Huntoon et al. is directed to personal care products in which absorbing fluids is a desired function. In contrast, Chien et al. is used in items such as sleeping bags, snow suits, mattresses, pillows and other similar articles. The articles of Chien et al. are articles in which liquid absorption is not desired. Therefore, adding superabsorbent fibers to the articles of Chien et al. would destroy the utility of the articles of Chien et al.

Even if one skilled in the art were to combine the teachings of Huntoon et al. with Chien et al. as suggested by the Examiner, one skilled in the art would not arrive at the claimed invention. Specifically, the Examiner does not address how the deficiencies of Chien et al. noted above are remedied by Huntoon et al. The Examiner does not suggest how Huntoon et al. supplies the requirement in the claims that at least 40% of the fibers are fusible fibers, or how Huntoon et al. suggest that the web of Chien et al. should not have gaps between the folds. Therefore, Huntoon et al. does not cure the noted deficiencies of Chien et al.

It is further noted that Huntoon et al. is directed toward providing space between the corrugations into which fluids or feces may be deposited. The space provided is a gap between each of the folds of the corrugated material (see column 6, lines 27-33 and column 6, line 65-column 7, line 4). One skilled in the art reading Huntoon et al. would be motivated to have gaps between the folds, especially in personal care products, in view of Huntoon's clear teaching which requires gaps between the folds. Therefore, combining the teachings of Huntoon et al.

with Chien et al. only serves to reinforce the teachings of Chien et al. to provide spaces between the corrugations.

Likewise, Huntoon et al. does not address the differences noted above for claim 24, therefore claims 25-29 are also not obvious over the combination of Chien et al. and Huntoon et al.

The Examiner has never addressed the above arguments. No comments were provided by the Examiner in the Advisory Action of April 3, 2003. Therefore, Appellants are unable to advance any additional arguments in this Brief.

In order for a combination of references to render a claim obvious under the meaning of 35 USC 103, the invention as a whole, including all of the limitations of the claims, must be taught or suggested by the references. *In re Royka*, 180 USPQ 580 (CCPA 1974). In the present rejection, the claim limitations of bonding the web throughout after corrugation, using at least 40% fusible fibers on the surface are not taught and having no gaps between the folds is not taught by Chien et al. and Huntoon et al., and the Examiner has not clearly stated how these limitations are suggested by Chien et al. and Huntoon et al. Therefore, the rejection of the claims based on the combination of Chien et al. and Huntoon et al. is untenable, and should be reversed.

Conclusion

For the reasons stated above it is Appellants' position that the Examiner's rejection of claims has been shown to be untenable and should be **reversed** by the Board.

Please charge the \$320.00 fee, pursuant to 37 C.F.R. 1.17(c), for filing this Appeal Brief to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. Any additional prosecutorial fees which are due may also be charged to deposit account number 11-0875.

The undersigned may be reached at: 770-587-7204

Respectfully submitted,

LATIMER ET AL.

By: 

Ralph H. Dean, Jr.

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CERTIFICATE OF MAILING

I, Ralph H. Dean, Jr., hereby certify that on June 24, 2003 this document is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By: 

Ralph H. Dean, Jr.

Appendix – The Claims On Appeal

The claims on appeal are:

13. A laminate comprising a first layer comprising a corrugated nonwoven web comprising a surface having a surface area, wherein at least 40 percent of said surface area is made from fusible fibers, and wherein said web is unbonded, corrugated to produce folds and subsequently bonded throughout, such that no gaps are present between said folds, and at least one second layer selected from the group consisting of nonwovens, wovens, knits, films, tissues, papers, foils and foams.

14. The laminate of claim 13 wherein said folds are of uniform height.

15. The laminate of claim 13 wherein said folds are of non-uniform height.

16. The laminate of claim 13 wherein said web comprises superabsorbent fibers.

17. The laminate of claim 13 wherein said corrugated nonwoven web is made from a process selected from the group comprising spunbonding, meltblowing, airlaying, coforming and bonding and carding.

18. The laminate of claim 17 wherein said folds are of uniform height.

19. The laminate of claim 17 wherein said folds are of non-uniform height.

20. The laminate of claim 13 wherein said web has been corrugated by a method selected from the group consisting of vertical lapping and rotary lapping.

21. The laminate of claim 13 wherein the fusible fibers comprise conjugate fibers.

22. The laminate of claim 13 wherein the corrugated nonwoven web has a void volume of at least 53 cm³/gm.

23. The laminate of claim 22 wherein the fibers of the corrugated nonwoven web are are perpendicularly oriented.

24. A personal care product comprising the laminate of claim 13 wherein said corrugated nonwoven web is aligned in said product in a transverse direction.

25. The personal care product of claim 24 which is a diaper.

26. The personal care product of claim 24 which is a training pant.

27. The personal care product of claim 24 which is an incontinence product.
28. The personal care product of claim 24 which is a bandage.
29. The personal care product of claim 24 which is a feminine hygiene product.